

REMARKS

In response to the Office Action mailed July 22, 2004, Applicants amended claims 1 and 21, and cancelled claims 8-10 and 24. Claims 1-5, 21 and 22 are presented for examination.

As amended, claims 1-5, 21 and 22 cover compositions that compose a fuel cell anode. The compositions include a catalyst and a copolymer of tetrafluoroethylene and hexafluoropropylene. The composition contains between about 75-95 weight percent of the catalyst with the balance being the copolymer of tetrafluoroethylene and hexafluoropropylene.

The Examiner rejected the previously presented claims under 35 U.S.C. §102(b) as being anticipated by Door or under 35 U.S.C. §103(a) as being unpatentable over Door in combination with JP '673 or Watanabe.

Door does not disclose the compositions covered by the pending claims at least because Door does not disclose fuel cell anode compositions that contain a copolymer of tetrafluoroethylene and hexafluoropropylene. As a result, the rejection under 35 U.S.C. §102(b) should be withdrawn.

Further, without conceding that such an interpretation is correct, even if Door could properly be interpreted as suggesting the possibility of replacing his disclosed polymer binders with other polymer binders, Door provides no teaching regarding what other polymer binders might work. As known to those skilled in the art, it can be difficult to predict what, if any, binders may successfully work when incorporated into a fuel cell anode. Thus, even if one skilled in the art had somehow been motivated to replace Door's binder with the binder required by the pending claims, that person would not have had a reasonable expectation that any binder other than those disclosed by Door would have worked for its intended purpose.

Moreover, again assuming without conceding that one skilled in the art would have been motivated to replace Door's binder with a different binder, that person would not even have considered the binders disclosed in JP '673 because JP '673 is directed to liquid fuel cells (see JP '673), which are very different from the hydrogen fuel cells that are focused on in Door. As known to those skilled in the art, just because a binder works in an electrode in one type of fuel cell (e.g., the liquid fuel cells disclosed in JP '673) does not mean that the binder in an electrode

of a different kind of fuel cell (e.g., the hydrogen fuel cells disclosed in Door). Accordingly, one skilled in the art would not have had a reasonable expectation that the binder disclosed in JP '673 could have been successfully used in the fuel cells disclosed in Door.

Nor does Watanabe cure Door's infirmities. Watanabe discloses a process that apparently results in a layer that contains: 1.) catalyst particles coated with ion exchange resin; 2.) non-catalyst particles coated with ion exchange resin; and 3.) a hydrophobic binder. (Watanabe at Abstract). This is very different from Door's composition, and so one skilled in the art would not have even considered Watanabe if such a person were somehow motivated to try to modify Door's composition. Moreover, even if that person were so motivated and did consider Watanabe, the person would not have had a reasonable expectation that using Watanabe's binder would work in Door's composition because the compositions are so different.

In addition, even if one skilled in the art had somehow been motivated to combine Door with JP '673 or Watanabe, that person would not have been motivated to use the specific weight percentage range of catalyst required by the claims. Even if such a person were motivated to use the weight percentage range of catalyst required by the claims, as known to those skilled in the art, the successful use of different binders can involve the use of different weight percentages of the binder and catalyst material. Thus, one skilled in the art would not have had a reasonable expectation that Door's binder could be successfully replaced with a different binder without having to change the weight percentage of the binder in the composition.

Neither Door, JP '673 nor Watanabe, alone or in combination, disclose or suggest the compositions covered by the pending claims. There is no suggestion to combine these references to provide such compositions, and, even if there were such a suggestion, one skilled in the art would not have had a reasonable expectation that the resulting composition would be successful for its intended purpose.

In view of the foregoing, Applicants request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

The Examiner objected to claim 3 because, in the Examiner's view, claim 3 does not further limit the claim from which it depends. Claim 3 depends from claim 2. Claim 2 requires


that the catalyst be capable of catalyzing oxidation of a fuel cell gas. Claim 3 further requires that the fuel cell gas comprises hydrogen. In other words, claim 3 is limited to catalysts that are capable of catalyzing hydrogen. This is clearly more limited than claim 2 because claim 2 more generally covers catalysts that can catalyze the oxidation of any fuel cell gas, not just hydrogen, as required by claim 3. Applicants therefore request reconsideration and withdrawal of this objection.

Applicants believe the application is in condition for allowance, which action is requested.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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